REMARKS / ARGUMENTS

Claims 1-17, 20, and 23-30 have been rejected under 35 USC 103(a) as being unpatentable over Meyer et al (US Patent 5,742,504) ("Meyer"), and Van Dort et al (US Patent 5,537,104), ("Van Dort").

The Examiner asserts that Meyer teaches a machine vision system having a plurality of vision processors (VPs), each being on a respective VP computing platform, citing the connection of **a plurality of digital cameras** to a machine vision system described at col. 4, lines 26-28 of Meyer. However, with reference to Fig. 2, it's clear that there's only **one** digital camera and **three** analog cameras. Further, it's clear to one of average skill in the art of machine vision that these are merely **cameras**, not full vision processors that can perform image processing and image analysis as is common in machine vision systems. Instead, these four cameras are part of a single machine vision system having a single vision processor (VP) solely responsible for image analysis, and residing on host computer 28. Host computer 28 is connected to the plurality of cameras 24 that serve merely to acquire images for subsequent image analysis on the host computer 28.

The Examiner also asserts that Meyer teaches "at least one user interface (UI) being on a UI computing platform (taught as the use of a Visual Basic toolbox presented to the user on a machine separate from the VPs", citing col. 4, lines 54-63, and col. 5, lines 4-5 and 15-20, each of which refer to camera

custom controls. However, Fig. 2 clearly shows **only one** computing platform that hosts BOTH the machine vision analysis software, as well as the Visual Basic tool box, since there's only one general computing platform in Fig. 2.

By contrast, all the claims, such as claim 1, require at least two VPs, and a UI, each on a separate respective computing platform. Meyer teaches an architecture that has image analysis being performed only on the host computer 28, as well as a UI on the same host computer 28. Again, the cameras 24 are NOT VPs. So, the architecture taught by Meyer is **entirely different** from the architecture taught and claimed by Applicant. Consequently, Meyer does not teach any element of claim 1, for example, since each element requires at least two VPs and a UI, each on a separate respective computing platform.

Further, since the cameras 24 are not VPs, the camera control cited by the Examiner of col. 5, lines 57-67 is NOT a link function. It merely connects an analog camera of the cameras 24 to image digitizer / frame grabber 22 (col. 6, lines 10-16). The image digitizer / frame grabber 22 does no machine vision analysis, whereas each VP in Applicant's invention is a full machine vision processor capable of image analysis, such as "search", "caliper", etc.

In fact, Meyer is silent on a link function as taught and claimed by Applicant, i.e., "the link function being a control function executable by the first VP (Meyer teaches only one VP), the link function being both for enabling a user to configure any second VP (Meyer does not teach a second VP) using the at least one UI, and for establishing communication between the any second

VP (Meyer does not teach a second VP) of the plurality of VPs (Meyer teaches only one VP) and the at least one UI on the UI computing platform (there is no separate UI computing platform in Meyer), the any second VP being on a second VP computing platform (there is only one VP computing platform in Meyer capable of machine vision analysis)".

Although Meyer appears to teach the display of live images at col. 6, lines 10-16, this occurs in a different context from Applicant's invention, as explained above.

The Examiner admits that Meyer fails to explicitly teach providing a first VP with a link function, the link function being a control function executable by the first VP, and executing the link function so as to issue instructions from the first VP to the UI to establish communication with a second VP. Applicant confirms this, further emphasizing that Meyer does not teach a first VP with a link function because the first VP is the only VP, and it resides on the same computing platform as the UI. Therefore, Meyer teaches away from Applicant's invention, as set forth in claim 1, for example.

Van Dort teaches a system for equipment control, comprising a common communications channel. Van Dort never mentions machine vision systems, or vision processors (VPs). Although Van Dort does mention an "actuator", Van Dort also reveals that each type of equipment that communicates over the channel also acts as an actuator: "Equipment units and actuator units are not mutually exclusive .... in the system the actuator and equipment units are

treated as equivalent." See col. 5, lines 65-67, and col. 6, lines 1-9. Thus, Van Dort teaches away from Applicant's invention, where there must be distinct VPs and a distinct UI, each on a respective distinct platform.

Further, Van Dort teaches that "the equipment units to which a message is transferred will change their state in a way contained in or implied by the message". Notice that this language says NOTHING about issuing "instructions from the first VP to the UI to establish communication with the any second VP", as required by claim 1, for example. Van Dort does NOT teach what is claimed by Applicant, in whole or in part.

Therefore, Van Dort does not make up the deficiency in Meyer, and so combining Meyer and Van Dort does NOT result in Applicant's invention. This is because Meyer is architecturally flawed, and Van Dort is also architecturally flawed in the same way. Both Meyer and Van Dort do not teach a first and second distinct VP on respective VP platforms that interact with a UI on a distinct UI platform, as required by all the claims. Combining these references does not result in anything even resembling Applicant's invention, and so there would not be any motivation to combine them. Accordingly, the rejection of claim 1 is deemed to be overcome.

Dependent claims 2-17 are deemed to be allowable as they depend from claim 1, herein shown and deemed to be allowable.

Independent claims 20, 26, and 30, being analogous to claim 1, are deemed to be allowable for reasons analogous to those advanced regarding claim 1, herein deemed to be allowable. Accordingly, the rejections of claims 20, 26, and 30 are deemed to be overcome.

Regarding claims 21-22, the Examiner states that Meyer and Van Dort both do not teach interconnecting a plurality of VPs and the UI via a network, or via a network that supports a TCP/IP protocol. The Examiner then cites Blowers as teaching the use of a network for vision processor/user interface communication. However, a glance at Fig. 2 of Blowers shows that the machine vision system architecture taught therein is IDENTICAL to the machine vision system architecture taught in Meyer. Thus, adding Blowers to Meyer and Van Dort does not change the architectural flaws of combining just Meyer and Van Dort. Alternatively, merely adding network communications to Meyer and Van Dort fails to repair the deficiencies of the combination of Meyer and Van Dort, since each of these references does not teach the first and second VPs, each on separate computing platforms, and the UI on a separate computing platform. Accordingly, the rejection of claims 21 and 22 is deemed to be overcome.

Regarding claims 23-25, 27-27, and 31-34, since these claims depend from independent claims herein shown and deemed to be allowable, these claims are also deemed to be allowable.

Accordingly, Applicants assert that the present application is in condition for allowance, and such action is respectfully requested. The Examiner is invited to phone the undersigned attorney to further the prosecution of the present application.

Respectfully Submitted,

Dated: 5/26/05

Russ Weinzimmer
Registration No. 36,717
Attorney for Applicants

P.O. Box 862
Wilton, NH 03086

Phone: 603-654-5670
Fax: 603-654-3556